

WHAT IS CLAIMED:

Sub A1

5 1. A process for the structuring of a cheese portion comprising:
providing portions of curd or cheese of a first average dimension and having a
total surface area,
adding a composition comprising transglutaminase to at least five percent
of said total surface area, said composition providing a bonding-sufficient amount
of transglutaminase to said total surface area,
10 pressing said portions together to eliminate air between said portions while
forming a volume of curds or cheese that is larger than an single portion of said
portions of curds or cheese,
allowing said transglutaminase to bond said portions of curds or cheese
together to form a unit of cheese.

15 2. The process of claim 1 wherein said composition comprises transglutaminase
in the presence of less than a 1:1 weight ratio of casein or caseinate to
transglutaminase.

20 3. The process of claim 1 wherein said composition comprises transglutaminase
with less than 10% by weight of said transglutaminase composition
comprising casein or caseinate.

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25 4. The process according to claim 1 wherein said transglutaminase is provided to
the curds or cheese in an amount of about 0.01-10.0 units per gram of cheese
protein.

30 5. The process of claim 4 wherein the time in which said curds or cheese is
allowed to bond is in the range of about 10-80 hours at a temperature is
between 40°F and 125°F.

6. The process according to claim 2 wherein said transglutaminase is provided as

a solid mixture of transglutaminase and inorganic filler at a concentration in the range of about 0.02-5 units of transglutaminase per gram of curds or cheese protein.

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7. A process for the structuring of a cheese portion comprising:
breaking a single curd portion having a weight of between 2 and 40 kilograms into smaller segments of curd;
adding a composition comprising transglutaminase to said smaller segments of curd in an amount of transglutaminase sufficient to chemically bond said smaller segments of curd together,
pressing said segments of curd together to eliminate air between said portions while forming a volume of curds that is larger than 50 kilograms, and
allowing said transglutaminase to bond said segments of curds together.
8. The process of claim 7 wherein said allowing said transglutaminase to bond said segments of curds together is performed for at least two hours at a temperature between 40°F and 125°F.
9. The process of claim 8 wherein said segments of curd cure to form cheese during said allowing said transglutaminase to bond said segments of curds together.
10. The process of claim 7 wherein said transglutaminase is added as a solid composition to said smaller segments of curds.
11. The process of claim 10 wherein said solid composition of transglutaminase comprises as a mixture of transglutaminase and inorganic solid.
12. The process of claim 7 wherein transglutaminase is added to said smaller segments of curd in an amount of 0.001 to 0.5% by weight of transglutaminase to said smaller curd segments.

13. The process of claim 12 wherein said transglutaminase is added to said smaller curd segments by a physical process including at least one step selected from the group consisting of tumbling, stirring, agitation, spraying, stirring, and shaking.

5 14. The process of claim 13 wherein said composition comprising transglutaminase contains from 0-10% by weight of transglutaminase of protein.

 15. The process of claim 7 wherein said composition comprising transglutaminase comprises transglutaminase in an aqueous carrier, and the composition
10 is free of ingredients that will chemically bond with said transglutaminase.

 16. The process of claim 12 wherein said smaller segments of curd are chemically bonded by said transglutaminase reacting solely with protein in said smaller curd segments.

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